

**ABSTRACT**

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2       Method and apparatus for verifying at runtime an invariant property of a data  
3 structure. In various example embodiments, code that verifies whether a runtime value of  
4 the data structure is consistent with the invariant property is automatically generated in  
5 response to an annotation of the data structure in the source code. In executing the  
6 program, the runtime value of the data structure is compared to the invariant property in  
7 the automatically generated code. If the runtime property is inconsistent with the invariant  
8 property, the program branches to exception handler code.